Sea&Shore

THE NAVY AND MARINE CORPS AFLOAT AND SHORE SAFETY MAGAZINE

WHERE ARE THE SUPERVISORS?

Supervision and Accountability

2018 Vol. 13 | No. 2

Sea&Shore

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Commander, Naval Safety Center	RADM Mark L. Leavitt
Deputy Commander	CAPT Roger L. Curry, Jr.
Command Master Chief	CMDCM Baron Randle
Director, Afloat Safety Programs	CAPT J. Lee Bennett
Director, Shore Safety Programs	Jonathan Wilson

EDITORIAL STAFF

Safety Promotions Division Head	April Phillips
Editor	Michael J. Morris
Social Media Manager	Susanne Greene

EDITORIAL OFFICE
Commander, Naval Safety Center
Attn: Sea & Shore
375 A Street
Norfolk, VA 23511-4399

SAFETY PROMOTIONS DIVISION
Telephone: (757) 444-3520, ext. 7870 (DSN 564) / Fax: (757) 444-6791
General email: safe-mediafdbk@navy.mil
Editor's email: michael.j.morris@navy.mil

REPORT A MISHAP
(757) 444-2929 (DSN 564)

AFLOAT SAFETY PROGRAMS
Telephone: (757) 444-3520 (DSN 564)

Surface Division	ext. 7831
Email: safe-afloat@navy.mil	
Submarine Division	ext. 7838
Email: safe-submarines@navy.mil	

OPERATIONAL RISK MANAGEMENT/EXPEDITIONARY WARFARE SAFETY PROGRAMS
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Operational Risk Management	ext. 7204/7271
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Telephone: (757) 444-3520 (DSN 564)

Occupational Health and Industrial Safety	ext. 7820
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MESSAGE FROM THE EDITOR

Mishaps in the Fleet have, and will most likely always occur as emphasized by several recent high-profile accidents. These accidents have placed a spotlight on safety culture in the Navy and have led us to ask certain questions: What are the root causes of these mishaps? What can we do to reach a zero-sum mishap rate? How can we increase safety awareness? How can we expand access to, and advance the flow of information to improve safety culture?

With these questions in mind, the Naval Safety Center is currently restructuring to become a powerhouse of change for safety culture in the Navy. The Safety Center is creating a new division called Knowledge Management and Safety Promotions (KMSP). The Knowledge Management Department of KMSP will concentrate on data analysis and predictive modeling, giving leadership and safety professionals access to the information they will need to prevent mishaps. The safety promotions component, to which the public affairs and lessons learned teams belong, have been tasked with developing products that translate this data for ease of use to improve safety culture, and reduce our overall mishap rates.

The Naval Safety Center wants to engage with our communities to better understand what tools safety professionals need to meet mission requirements. Do you as a reader feel that this publication is a useful tool or would the associated content be better delivered via alternate formats? What products will better enhance your ability to reduce mishap rates and the overall safety culture of your command?

Please email our team at SAFE-MediaFdbk@navy.mil or visit our Facebook page at https://www.facebook.com/NavalSafetyCenter/ and leave us a comment. Change is coming, and you have a chance to help shape it, to improve the safety culture, and reduce or prevent future mishaps.

Editor Sea & Shore Magazine

CONTRIBUTORS WANTED

We do our best to cover stories, articles and information that may be helpful or necessary to manage your safety program and/or promote safety awareness on and off duty. We want to hear from you; we want you to write about your safety programs, best practices, and your on or off-duty risk-management stories.

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News briefs: 500 words
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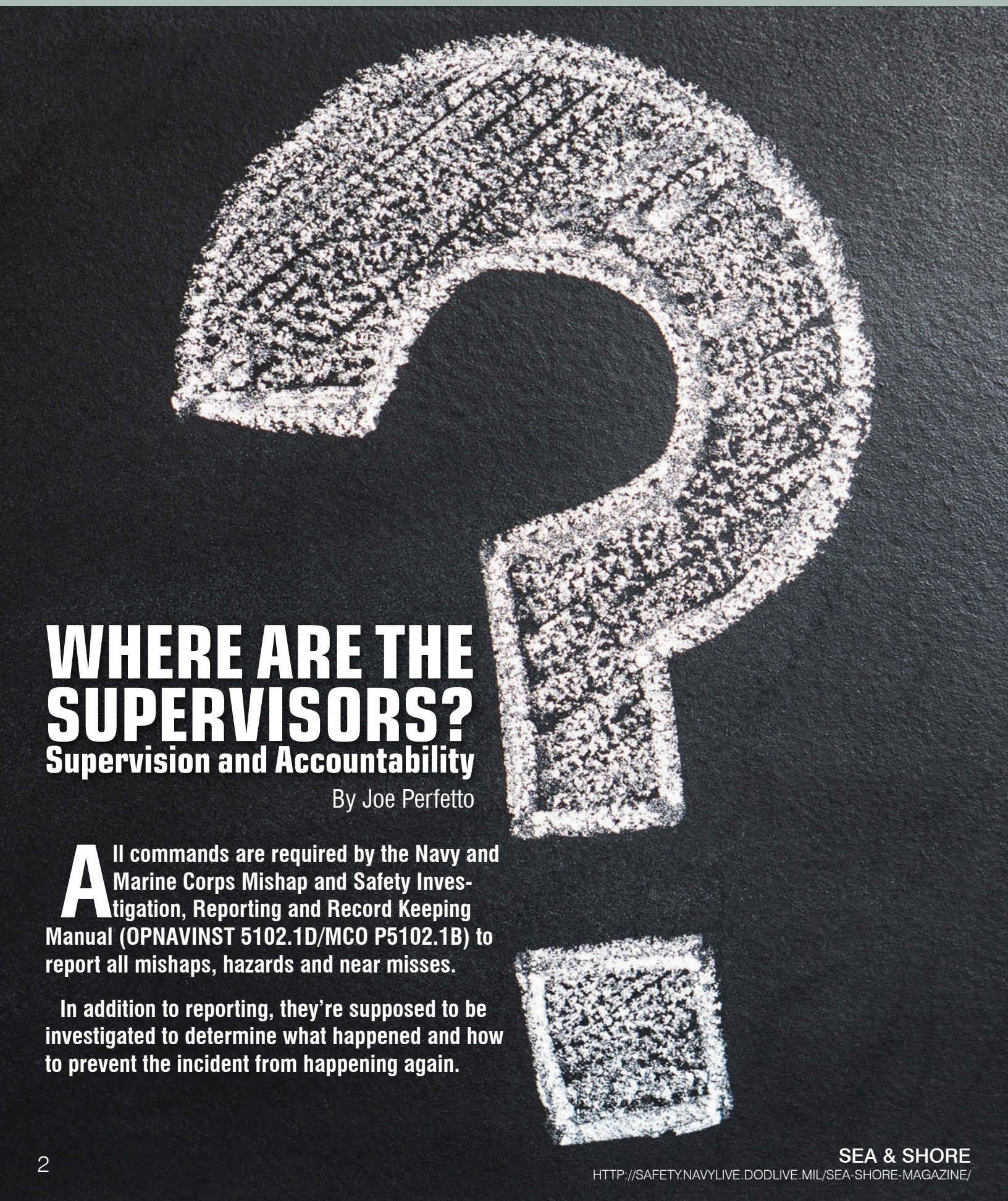
Our surveys consistently show that readers like articles written by their peers, and they like to read about true-life events and experiences. Your effort keeps others from having to learn the hard way. Therefore we want your letters, feedback, and comments.

We want honest appraisals and realistic solutions. Our staff is always open to new ideas, so don't be afraid to try something different. Send your submissions, and comments to michael.j.morris@navy.mil.



WHERE ARE THE SUPERVISORS?

Supervision and Accountability

By Joe Perfetto

All commands are required by the Navy and Marine Corps Mishap and Safety Investigation, Reporting and Record Keeping Manual (OPNAVINST 5102.1D/MCO P5102.1B) to report all mishaps, hazards and near misses.

In addition to reporting, they're supposed to be investigated to determine what happened and how to prevent the incident from happening again.

Personnel from the Naval Safety Center review all Web Enabled Safety System and a majority of the Enterprise Safety Application Management System reports.

Over time,we've learned both military and civilian personnel know how to get injured. There are no new ways to get injured. Most of the time a generic write-up can be used and all that's required is to change the name.

Why is this occurring? The words that come to mind are **SUPERVISION** and **ACCOUNTABILITY**.

Supervisors own the process and employees are accountable to follow the process. If an employee is not performing a defined process properly, why is the process not being followed? What should be done to ensure the process is followed? Did the supervisor or another employee witness a violation and not correct the action? The majority of injuries can be categorized as compliancy, but what is the cause?

Here is an example of improper supervision and improper personal accountability: An employee is using a 6-foot ladder when an 8-foot ladder is necessary. The employee stands on the top rung. Not authorized. The thought process is "I'm only going to do this one time." A supervisor or another employee witnessed the employee not following the process. Nothing was said. The employee did not fall; no injury.

Behavioral science would show this as a sure certain positive. If an individual accomplishes a task without regards to personal safety and does not get injured, the individual has convinced him/herself that this behavior is satisfactory. The more the task is accomplished without regards to safety, the higher the chance of a mishap.

The supervisor or employee who witnessed the violation should have stopped the job on the spot. The process should be reviewed and the proper ladder brought to the job site. What usually happens is finish the job and try to remember to bring the proper ladder next time. Did the employee using the ladder know the top two rungs should not be used to stand on? If properly trained he/she should know. Did the supervisor or other employee know? The supervisor should know, the other employee may or may not know. If the process looks unsafe it usually is.

How are dilemmas like this solved? Supervisors are not always around and when the job needs to get accomplished and personal accountability sometimes falters when the job needs to be done now.

If the employee's lack of accountability caused a personal injury what else is counted besides the injured employee? Depending on the injury, a trip to the hospital is required. If during working hours, another employee may take them (more lost time) or emergency services are called. Either way the project is stopped. Time is lost.

If the proper ladder was brought or the project delayed until the proper ladder arrived, the chance of an injury is greatly reduced. Time was delayed, not lost.

During this time of fiscal restraint employees may hear "you need to do more with less." No such luck. With less, what is going to be sacrificed?

Is safety culture needed? Yes, safety should always be included into the command culture or command climate. Make it common practice to stop an unsafe evolution and properly train employees or shipmates.

When using operational risk management (ORM), you must decide whether the risk overrides the benefit. There are very few results in everyday tasks were the risk overrides the benefits. Everyone who sees a safety violation should say something. If you think it is unsafe most likely it is. Bottom line, supervisors should supervise and review processes. Employees should be accountable to report processes that are not working or outdated.

Mr. Perfetto worked in the Shore Safety Programs Directorate of the Naval Safety Center, where he served as a safety and occupational health specialist.

TEN RULES TO IMPROVE SAFETY LEADERSHIP

By Steven Geiger

Good leadership in safety and occupational health within the Navy helps differentiate the best performing commands from the rest. Such a healthy safety culture fully supported by leadership at all levels pays great dividends for commands and the Navy as a whole. The following guidance for leadership is taken from the Army's *Leader's Guide to Civilian Safety*.

No one is in a better position to influence worker safety than the leader. If you provide employees with proper guidance, training, and development of good work habits, they will perform safely whether or not you are in the area. The safety culture of an organization is often described as "what people do when no one is looking." Leaders drive safety culture by setting the example, encouraging and rewarding safe performance, and by not rewarding or tolerating short cuts and unsafe acts.

1 Know and care for your personnel. In a sense, you have two families. Care for your people as you would care for your family. Be sure each worker understands and accepts his or her personal responsibility for safety. Know their training status and their qualifications. Verify knowledge and skills level of new employees, regardless of whether or not they have been previously certified in a certain area. Consider individual abilities when assigning job tasks.

2 Know the rules of safety that apply to the work you supervise. Never let it be said that one of your people was injured because you were not aware of the required safety precautions. Know your equipment, its capabilities, and its condition. Checklists and publications are available to guide you.

3 Anticipate the risks that may arise from changes in equipment or methods. Evaluate the impact of equipment changes or modifications, timeline and schedule changes, seasonal and weather changes and personnel assignments and skill levels. Changes in one or more of an operation's conditions can introduce new hazards or increase risk, if not addressed. Seek and use expert safety advice that is available to help you guard against new hazards.

4 Encourage your staff to discuss with you the hazards of their jobs. A job hazard analysis is a good tool to discuss specific tasks, equipment and safe procedures at the start of an operation to ensure you and your personnel understand the requirements, procedures and equipment to perform the tasks safely and efficiently. Be receptive to the ideas of your workforce. They are a valuable source of first-hand knowledge that can help prevent mishaps.

5 Assign sufficient and qualified people and equipment to get the task done safely. Do not allow shortcuts. In the long run, shortcuts do not save time or money.

6 Follow up on your instructions consistently. Provide positive reinforcement of safe behavior by recognizing employees who use personal protective equipment and follow safe procedures. See that your people use the safeguards provided. Routinely spot check their work. If necessary, enforce safety rules through disciplinary action. Left uncorrected, unsafe performance becomes the accepted standard. Frequent excuses for poor safety performance include: "We've always done it this way." "No one has gotten hurt yet."

7 Set a good example. Demonstrate safety in your own work habits and personal conduct. Do not be a hypocrite in the eyes of your staff. Set and enforce high operating standards in every part of your operation. Safety is a by-product of professionalism, of doing the job right the first time and every time.

8 Investigate and analyze every mishap, however slight. Develop corrective measures to prevent similar mishaps. Corrective action following a minor mishap or near-miss may be an opportunity to avoid a major mishap. Where minor mishaps go unheeded, crippling major mishaps may strike later.

9 Cooperate fully with those in the organization who are involved in employee safety. The safety professional, industrial hygiene and occupational health staff work to help you identify and protect your workers from injury and health hazards. Their purpose is to help you get your job done safely. Maintain awareness. Do not relax your vigil and become complacent when everything is running smoothly.

10 Remember, mishap prevention is good business and increases mission readiness.

Mr. Geiger worked in the Shore Safety Programs Directorate of the Naval Safety Center, where he served as the occupational health and industrial safety division head.

WORKPLACE SAFETY INSPECTIONS

By Joseph Perfetto

Workplace safety inspections are required annually in accordance with Office of the Chief of Naval Operations Instruction 5100.23 series (OPNAVINST 5100.23) and the Code of Federal Regulations (29 CFR 1960.25). Workplace inspections are one of the principle means of detecting hazards and unsafe behaviors that may develop in a workplace over time. Supervisors and employees should always be on the lookout for hazards and unsafe behaviors, but there are occasions when hazards overlooked due to complacency.

Workplace inspections help to ensure hazards are identified and corrected before a mishap occurs, and may be conducted by a safety and health professional, collateral duty safety officer, supervisor, higher level of command or through base operations support services. These inspections seek to discover conditions, procedures, and practices that if allowed to continue, could lead to mishaps. Your installation safety office and preventive medicine activity are another resource that can help conduct these critical inspections.

Although workplace inspections are usually scheduled once annually, what happens during the remaining 364 days of the year? Employees are the eyes and ears of the deckplates and are a key extension of a command safety office in ensuring one's own safety and health, as well as the safety and health of others.

During workplace inspections checklists may be used; line items from the CFR, National Fire Protection Agency, American National Standards Institute and other agencie's regulations can be utilized, and a comprehensive checklist is available at https://intelshare.intelink.gov/sites/navsafe/OnOffDuty/Workplace_Inspection_Checklist.xls. This and other checklists are not and should never be considered complete and individuals utilizing checklists should always be properly trained prior to using one. Checklists are designed only to give a basic idea of what hazards could exist and anything that is considered out of the ordinary or just does not seem right should be immediately reported to the safety officer for further investigation or evaluation.

Inspection Frequency

Inspections and assessments of operations, practices and facilities are required annually, or more often if necessary. Inspection frequency can be daily, weekly, monthly or quarterly based on the type of organization and potential hazardous activities and conditions.

Frequently changing workplace conditions or high risk operations warrant more frequent checks to ensure safe performance.

Inspection procedures will emphasize use of observation, interviews, operational reviews, performance testing, and similar techniques designed to detect high risk of both unsafe acts and conditions at the earliest possible time.

Most concerns during formal inspections or assessments are related to complacency and ignorance of standards. During inspections be on the lookout for statements such as "that has been like that for a while" or "that has been written up numerous times and is never fixed." Statements such as these help indicate issues that may need to be addressed.

Safety inspections should:

- *Detect missing equipment guards, poor housekeeping, inadequate maintenance of tools or other unsafe conditions or equipment that might cause mishaps.*
- *Detect short cuts or other unsafe actions by personnel such as operating equipment without authority or at unsafe speeds, unsafe handling of materials and using improper personal protective equipment.*
- *Encourage employees to inspect their own work areas and practices.*

Inspections can be accomplished by supervisors or employees.

Rountinely Identified Items

During formal annual inspections and assessments there are some deficiencies that are generally identified, such as electrical. This can include daisy chains, excessive use of extensions cords or overloaded junction boxes. These items should be identified by the employees and supervisors in routine inspections and assessments.

Formal inspections should focus on items not routinely inspected or assessed. While performing formal inspections and assessments, non-routine items such as ergonomics (work benches, desks), fall protection equipment inspections, respiratory protection equipment inspections should be inspected. Here are some

questions to ask yourself: Does the command have a recent industrial hygiene survey? Do the employees know where the survey is located? Do the employees know how to read it? Is the survey being adhered too?

What Can You Do?

With all the established inspections and assessments, why does safety still fall to the wayside? This is an unfortunate and recurring occurrence. Is someone bypassing a workcenter safety requirement no matter what it is? Regrettably, the answer is often yes and this happens more than it should.

Does taking a short cut or bypassing a safety regulation always cause a fatality or injury? No, it does not. Are some safety rules a pain? You bet they are. However, these rules and regulations are required and are here for your protection. Most rules are written in blood, because someone has been seriously injured or killed requiring the establishment of these rules, procedures and standards.

Don't allow yourself or anyone else become an incident statistic, follow the rules and standards. Remember to be safety-wise and if you see something wrong say something. The life you save could be your own.

Mr. Perfetto worked in the Shore Safety Programs Directorate of the Naval Safety Center, where he served as a safety and occupational health specialist.

Safety Sta

ndard Violations

How many can you find?

Safety AWARENESS & PRACTICES

Important at Sea, in the Air or Ashore in the Office

By Jane Bush

Safety awareness and practices follow us everywhere. All personnel should be in tune with their work environment and be cognizant of safety at all times. Just as fleet Sailors must be aware of the flight deck, underway replenishment or engine room hazards, all personnel working ashore must be aware of office safety issues.

Working in an administrative command's safety office has shown me not only the hazards that exist, but also the false sense of security displayed by staff members. Staff often get complacent ashore and forget what they've learned in the fleet with regards to safety. Consider the basics of an office. Desk chairs tend to have wheels and can lean back. Standing on a chair with wheels to reach an object, leaning far back in a desk chair, and using the chair to haul boxes are a few potential injury-causing actions. I'm still amazed when personnel stand on rolling chairs to reach something right in front of the safety staff.

Popular today, although not supported by the Department of Defense, is the use of stability balls as chairs. Originally designed to prevent musculoskeletal injuries, research has shown that they may actually cause injury when used for long periods.

The importance of breaks for office workers can never be overstressed. Breaks enable your body to rest and help prevent musculoskeletal injuries, to say nothing of your need to periodically rest your brain. File cabinet drawers left open present hazards for personnel walking into them or tripping over them. Opening several cabinet drawers at once can lead to cabinet tip-over.

Worn carpets with holes and water on tiled floors are potential trip and slip hazards. Power cords crossing aisles can also be a trip hazard. Office clutter limiting exit aisle width could become a hazard in case of an emergency. Good housekeeping means a safer environment.

Electrical safety should always be a priority. Many office spaces do not have sufficient power outlets to supply all the power gadgets used today, resulting in people using several power cords plugged together. "Daisy chaining" of extension cords is a frequent safety issue, especially during the holidays. Combining appliances such as coffee pots, microwaves and refrigerators on one circuit can easily overload the circuit. Overloading circuits greatly increases the likelihood of fires as the increased power consumption translates into heat in the wiring, the circuit breakers and the connected devices. Securing power on an overloaded circuit may suffice to remove the electric shock hazard, but it does not put out the fire caused by melting wires or sparking breakers!

Mold is a hazard that brings fear to many individuals and the truth is mold exists everywhere. There are numerous kinds of mold with varying degrees of toxicity. Certain molds can be dangerous and that is why every effort should be made to prevent mold growth and decrease mold exposure. Additionally, individuals have varying sensitivity levels or conditions that make them more susceptible to mold. There are plenty of damp spaces in an office building where mold can grow, especially older buildings that suffer from leaks, particularly in inaccessible or confined spaces.

Senior leadership support is essential in reinforcing the importance of safety training, practices and the safety of the organization.

Safety training should not be overlooked. The assumption of "I know how to be safe," is often proven otherwise just by looking at the mishap list. Safety training should be on-going, but should also be appropriate to the worker's surroundings. Senior leadership support is essential in reinforcing the importance of safety training, practices and the safety of the organization.

Working in an administrative environment ashore may be a relaxing break from a shipboard/overseas tour, but it is not an opportunity to disregard potential safety hazards or to defer safety training. The mission and the tools may be different, but the wisdom of vigilance still prevails. The office environment can harbor many hazards that we should all be aware of. Safety first is always a good rule, no matter where you are.

Ms. Bush is a safety & occupational health specialist for the Office Safety Ashore, PERS-53Z.

ONLINE RESOURCES

Office Envir ment
▶ https://www.cdc.gov/niosh/topics/officeenvironment/default.html

Ergonomics and Musculoskeletal Disorders
▶ https://www.cdc.gov/niosh/topics/ergonomics/default.html

Occupational Safety and Health Administration
▶https://www.osha.gov/SLTC/etools/computerworkstations/index.html

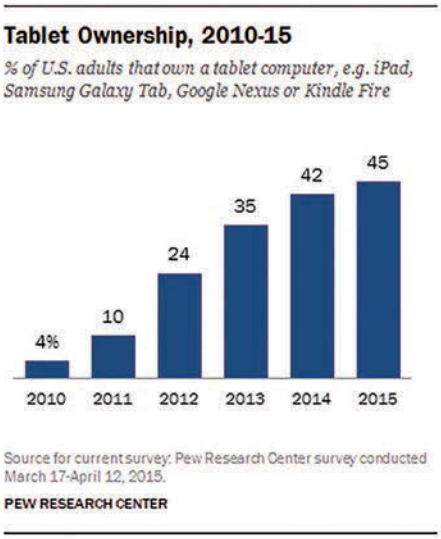
Indoor Environmental Quality
▶ https://www.cdc.gov/niosh/topics/indoorenv/

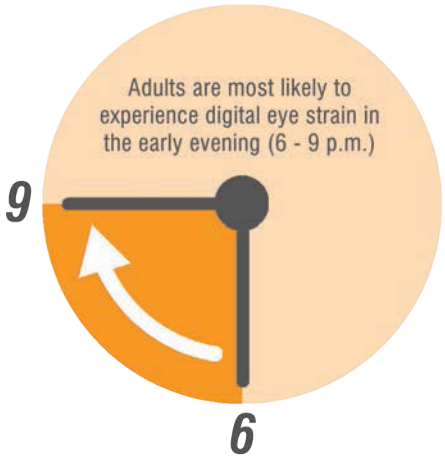
The National Institute for Occupational Safety and Health (NIOSH)
▶https://www.cdc.gov/niosh/index.htm

Technology Awareness: Digital Eye Strain and Text Neck

By Cindy Whitehead

Living in the modern digital age certainly has its benefits. How did we ever live without the endless amounts of information, instant results and ability to interact and communicate, all at our fingertips? We all enjoy the conveniences electronic technology offers, especially our mobile handheld devices. However, with all the advantages we gain from mobile technology comes the risk of serious and permanent health problems. According to the Pew Research Center, 68 percent of U.S. adults owned a smartphone in 2015. That's almost double mid-2011 numbers! With new products hitting shelves every day, the market for digital devices continues to grow. This means more time spent looking at electronic screens and digital content.





An average person checks the phone every 6.5 minutes in a 16-hour waking cycle (Nokia, 2012)

The intention of spending five minutes checking your email can easily turn into an hour browsing the web on your smartphone. Your eyes become dry and irritated, your vision blurred. Your thumb, wrist, and neck have been held in the same unnatural position the entire time. Before long, your thumbs have been typing in an awkward position and they start

hurting. Your wrists have been bent over and tendinitis can set in. Your neck aches from looking down at your phone for a long time. Many Americans average six to nine hours a day in front of digital devices; 76 percent of us are still looking at our devices the hour before we sleep!

Since it's unlikely that we'll unplug any time soon, awareness is one way to fight the onset of lasting eye strains and muscle sprains.

Digital Eye Strain

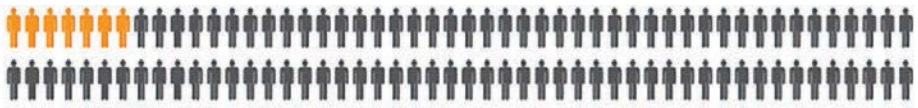
Digital eye strain is now a common repetitive strain injury among workers, surpassing rates for carpal tunnel syndrome and tendinitis. Eye redness or irritation from staring at the bright backlight of screens for long periods, dry eyes due to reduced blinking, blurred vision and general fatigue from staring at screens and straining to see small fonts and images are all symptoms of digital eye strain. The percentage of people experiencing digital eye strain increases with the number of devices used simultaneously. Headaches may occur from repeated eye strain.

While irritation and discomfort can be temporary, there is potential for long-term effects such as age-related macular degeneration or cataracts. Studies show that long-term overexposure to blue light, or high-energy visible (HEV) light could damage the retina, the part of the eye that brings objects into focus.

Strain is often caused by the distance between the eyes and a digital screen. Our eyes are designed for near vision and far vision rather than the mid-range viewing distance needed to focus on words and images on laptops and desktop screens. As many as 90 percent of patients don't discuss their digital viewing habits with their eye doctors.

Computer eyewear is designed for the mid-range viewing distance of reading a computer screen. Lens technology can cut glare, block HEV, and decrease brightness with or without a prescription. Talk to your eye care provider about your digital viewing habits to determine what options are best for you. Only 7 percent of U.S. adults have tried computer glasses to reduce digital eye strain.

Strain can also occur when overhead and surrounding light compete with your device's screen, flooding your eyes with blue light. Viewing in total darkness is just as bad, forcing your eyes to constantly adjust to lighting levels. Balance the light in the room with your primary viewing device for best results. Adjust the brightness of your device, or the size of the text, as necessary.



Only 7 percent of U.S. adults have tried computer glasses to reduce digital eye strain.

Give your eyes a break. Follow the 20-20-20 rule to avoid dry, tired eyes. Every 20 minutes, take a 20 second break and view something 20 feet away in the distance. Blink more often to rehydrate your eyes. Keep your screen clean to make text and images clearer and easier to read.

Text Neck

We are exposed to devices that cause "text neck" the majority of the day, almost every day!

People of all ages spend countless hours daily hunched over numerous types of handheld devices with their heads flexed forward. They are all in constant danger and at risk of developing "text neck." For every inch of forward head posture, the weight of the head increases force on the spine by an additional 10 pounds. Among the chief complaints associated with text neck are neck, shoulder, back, arm, finger, hand, wrist and elbow pain, as well as headaches and numbness and tingling of the upper extremities. A Mayo Clinic study found that long term forward neck posture leads to "long term muscle strain, disc herniation and pinched nerves."

Leaning over any object, not just smartphones and tablets, for an extended period of time (a sink full of dishes or caring for a newborn baby, for instance) can strain joints, muscles, and soft tissues causing pain. Is your home television mounted high above the fireplace or have you read your phone while lying on a couch or bed? Have you checked text messages under a table at a meeting or read a tablet in an economy airplane seat? This is not how we would set up our desk space at work, yet we may spend another few hours on our devices when we leave the office.

Try the same principles as if you were in an office:

- *Sit in a neutral position. Try resting your arms on your desk as you work.*
- *Hold your smartphone a little higher to decrease the amount of stress on the neck (so you don't have to look down as much).*
- *Give your neck a rest by looking up and bending sideways. Stretch every five to ten minutes.*
- *Switch to a telephone call or your laptop if the texting (or web surfing) session starts getting too long.*

Flexing the neck and head to look at a PDA in the lap requires isometric contraction of neck extensor muscles to hold the head in an imbalanced posture.

Bringing the PDA up to eye level relieves the stress on the neck. *Note:* it's important for the (upper) arm to be relaxed.

If adults are suffering from neck problems after only a few years of texting and cell phoning, imagine what's in store for our kids, who may start having physical problems much younger than we are. Do your kids slump at the computer, hang their necks as they look down on their cellphones and tilt their heads to the side as they hold the phone between their neck and their ear as they type? You can tell them to sit up straight, use a headset or speakerphone, and they'll roll their eyes like when your parents told you to stop slouching.

Most of us see our personal electronic devices as electronic security blankets, keeping us safe and ever-connected. But there is such a thing as being too connected — especially when a little bundle of glass, electronic circuitry, and plastic has the power to cause undue pain.

Cindy Whitehead is a human systems engineer at the Naval Surface Warfare Center in Dahlgren, Virginia focusing on human-centered design of the operation and maintenance of systems in Defense acquisition lifecycle and is the Program Manager for the Navy Ergonomics Program.

Time-Critical Risk Management

A - Assess the situation.
B - Balance resources.
C - Communicate to others.
D - *Do* and *Debrief* the event.

Because conditions can change with little or no warning, being ready allows you to manage that change and minimize risks associated with it.

The ABC***D*** Model provides a common language and structure for a measured response when an individual, team or crew is executing a routine task or when they are under duress from a more complex situation resulting from additive conditions, crew factors, or task loading. Training to the ABC***D*** Model will embed a set of patterns that will help personnel recognize and recall a set of actions to counter risk even when distracted. This simple and easy-to-remember mnemonic provides individuals with a means to evaluate risks and formulate mitigation strategies on-the-run and can easily be applied in both on- and off-duty situations.

Building a Respiratory Protection Program

By LT Blake Lusty

One of the toughest safety programs to keep functional through high turnover rates, multiple continuous maintenance availabilities (CMAV), and dry-docking selected restricted availability (DSRA) is the respiratory protection program. The program involves maintaining a high level of knowledge and accountability on the deckplates of how the program works, and strong leadership to establish and maintain the program. Below are the lessons learned from the USS Forrest Sherman (DDG-98) as she prepared for the Board of Inspection and Survey (INSURV) in August 2017.

Establishing a functional and efficient Respiratory Program

1. Develop a shipboard instruction utilizing OPNAVINST 5100.19E, Chapter B6 (Respiratory Protection) and 29 CFR 1910.134, Respiratory Protection (NOTAL). The shipboard instruction at minimum should focus on qualitative respiratory fit test protocols, list specific respiratory disqualifying conditions, and include the commands recent Industrial Health Survey (IHS). Standard operating procedures that govern the selection, maintenance, issue, and use of respirators should also be included.

2. Select and qualify a respiratory protection manager (RPPM) which requires attendance at CIN A-4J-0082, which is offered by the Naval Occupational Safety Health and Environmental Training Center. Recommend sending two additional RPPMs for personnel flexibility.

3. Determine all respirator operators to be medically qualified, fit tested, and trained on proper operating procedures. At a minimum, an active roster

should be maintained in relational admin (RADM) of all respiratory program participants. The RPPM shall maintain a roster to include: name, rate/rank, division, department, date of current PHA, date of fit test, fit test medium and size.

4. Conduct a review of the program annually and an audit of the inventory semi-annually, performed by the Safety Officer, to provide focused feedback on program deficiencies.

Building a Shipboard Culture to Support

When Forrest Sherman departed her 2016 DSRA in the fall of 2016, more than 20 percent of the original crew since entering the dry-dock period had departed the ship. This high turnover rate led to challenges in maintaining the respiratory program and general shipboard level of knowledge about respirators at a level required.

The most important element in a successful safety afloat program is that the crew understands how to smartly execute safety procedures and more importantly, understands detailed command, and Navy-wide safety instructions and expectations. Safety is a team sport.

The first step the Forrest Sherman safety team took was establishing a strong cadre of safety petty officers to execute the safety mission. Twenty safety petty officers were selected to cover the eighteen divisions through the command. In addition to the required personnel qualification standard (PQS), each safety petty officer was required to complete the Safety Afloat course required for the safety petty officer NEC 9571 designation. This allowed every division onboard to have a knowledgable safety representative at the deckplate – a significant safety force multiplier!

The next step is selecting a strong leader for the respiratory program. BM2 Sean Huntsman was selected to attend the RPPM school aforementioned. Upon returning, BM2 was instrumental in establishing the respiratory command instruction. BM2 empowered the safety petty officers to provide the deckplate forceful back-up to ensure Sailors who operated respirators were medically qualified, fit tested, and properly trained.

Ensuring one hundred percent accountability of all respirators operated on the ship was the most difficult task. Numerous respirators were located around the ship in spaces where contractors had worked and it was essential no sailor operated these respirators. This accountability was incorporated into the zone inspections in which inspectors were briefed to collect and turn in all respirators to BM2 Huntsman. Within two weeks full accountability was achieved.

Retraining the entire crew was the next step and required utilizing the ships deckplate cadre of safety petty officers to help train and provide a helpful link in directing any concerns or questions to BM2 Huntsman, the Forrest Sherman RPPM. The training first focused on raising shipboard level of knowledge through understanding the basics of hazard assessment and maximum use concentrations (MUC), two critical elements of respirator operation. Chapter B6 from the OPNAVINST 5100.19E, The Navy Safety and Occupational Health Program manual provides excellent guidance on understanding these terms. The hazard assessment is determining the type of contaminant and its concentration and this assessment is the most important consideration in the selection of respirators. The MUC is for a class of respirators that determines the maximum level of protection that a class of respirators can provide against a contaminant.

Establishing a respirator program is no easy task but BM2 Huntsman, with the support of the Forrest Sherman safety team and command leadership, led the charge. There is no allowable error for "getting it wrong" when it comes to safety. As a result of the hardworking efforts of the Forrest Sherman safety team and lessons learned documented above, the ship received high marks with a 92 percent overall in NAVOSH programs and the respirator program was out briefed as "one of the best on the waterfront."

LT Blake Lusty is the assistant safety officer aboard the USS Forrest Sherman (DDG-98).

DRIVERS TAKE NOTICE:
IT'S SPRING & MOTORCYCLISTS ARE HITTING THE ROAD

By Michael Borkowski

What do Motorcycles and May have in common? May is motorcycle safety awareness month, a time of year designed to remind all drivers and motorcyclists to share the road with each other. Motorcycle safety is an issue of increasing concern.

The American Motorcyclist Association (AMA), National Highway Traffic Safety Administration (NHTSA), Motorcycle Safety Foundation (MSF) and the Naval Safety Center are encouraging all motorists to share the road and watch for motorcyclists.

Mr. Borkowski works in the Shore Safety Programs Directorate of the Naval Safety Center, where he serves as a traffic and recreation off-duty safety specialist.

According to NHTSA data in 2016 there were 5,286 motorcyclists killed in motor vehicle crashes in the United States, 12 of whom were Navy shipmates. While the national numbers have not been released yet for 2017, the Navy numbers for fiscal year 2017 show we lost 21 sailors due to motorcycle crashes.

As the weather improves, more motorcyclists are out for a ride and sharing the road with other motorists. You may be aware of the risks of riding your bike, but are the drivers around you aware? Assume the answer is no. The sudden population of motorcycles on our roads often catches drivers by surprise this time of year. Do your part by being aware that other drivers may not see you. Stay out of blind spots and expect the unexpected.

Motorcycles are some of the smallest vehicles on our roads, often hidden in a vehicle's blind spot or just blending in with traffic and not seen. Drivers can successfully interact and share the road with motorcyclists by taking the extra time and looking twice to spot motorcyclists in traffic, especially at intersections.

Additional tips:

1. Passenger car drivers must allow a greater following distance behind a motorcycle. Motorcyclists will often slow down by downshifting, or merely getting off the throttle. In either of these situations the brake light does not illuminate. Therefore, it is suggested to allow a following distance of 3-4 seconds when following a motorcycle.

2. Drivers should also show extra caution at intersections. Many crashes occur when a driver fails to see a motorcyclist approaching an intersection and turns left in front of the motorcycle.

3. Drivers should never try to share a lane with a motorcycle. Always give a motorcycle the full lane's width. Motorcyclists should practice operational risk management and never split or share a lane with a motor vehicle.

4. Motorcyclists should avoid riding in poor weather, but sometimes it occurs unexpectedly. So car and truck drivers should take extra care and be more observant during rain, wind, or other inclement weather conditions.

5. Use your vehicle's rear-view and side-view mirrors properly to help eliminate blind spots where small vehicles like motorcycles can be missed. Motorcyclists should position their motorcycles to avoid being in a driver's blind spot.

6. All motorists should use turn signals for every turn or lane change, every time.

7. Motorcyclists can help themselves be more visible by wearing brightly colored clothing with reflective material, which will better their chances of being seen by other drivers.

The motorcycle awareness month campaign was launched by the AMA in the early 1980s and has since been adopted by many state motorcycle-rights organizations, NHTSA, MSF and government entities.

Reducing crashes is a shared responsibility for drivers and motorcyclists alike. Safe riding and cooperation from everyone on the road can help reduce these numbers. Stay alert, use common sense and be courteous while on the road. The Naval Safety Center wants drivers to get in the habit of looking for motorcyclists as they drive, not only during this campaign month but throughout the year.

ADDITIONAL RESOURCES

National Highway Traffic Safet Administration

▶ https://one.nhtsa.gov/Driving-Safety/Motorcycles

Motorcycle Safety Foundation

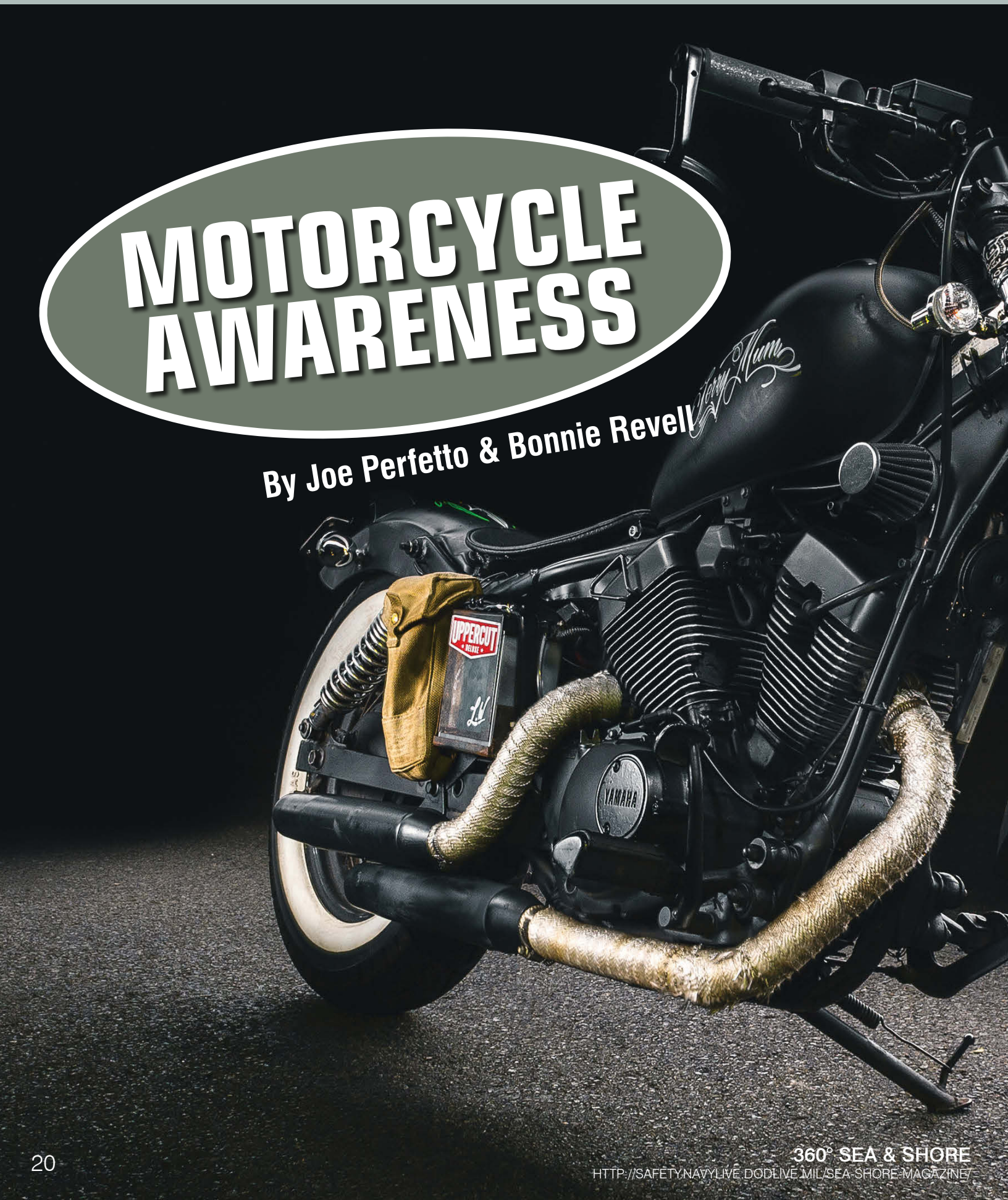
▶http://www.msf-usa.org/

ForCarDrivers.com

▶ http://www.forcardrivers.com/downloads.html

MOTORCYCLE AWARENESS

By Joe Perfetto & Bonnie Revell



The National Highway Traffic Safety Administration (NHTSA) and the Naval Safety Center want to take this opportunity to remind everyone that with warmer weather approaching more motorcycles will be on the roads.

All drivers are asked to please share the road and look twice for motorcycles. Because of their smaller size compared to other vehicles they are often difficult to distinguish in traffic and appear to be farther away than they actually are. This misperception has led to more than a few cars moving over on or merging into motorcyclists' lanes of traffic resulting in mishaps. Motorists often say following an accident with a motorcycle "I didn't see him/her there." Don't be that motorist.

The latest NHTSA vehicle mile travel data shows motorcyclists are about 27 times as likely as passenger car occupants to die in a motor vehicle traffic crash, and six times as likely to be injured.

As of May 1 of fiscal year 2018, the Navy has experienced seven motorcycle fatalities. This is up from from five incurred during the same time frame in fiscal year 2017.

The U.S. Marine Corps has experienced eight motorcycle fatalities this fiscal year, which is up from seven during this same period in fiscal year 2017.

Most mishaps occur with riders under the age of 27. The 25 and under age group is usually riding sport bikes and wearing required protective gear, but many of them are riding with little to no experience and pushing their machines' capabilities, which can override the effectiveness of even the best protective gear on the market when tested in crashes at high speed.

Command leadership should ensure military riders take the mandated motorcycle safety training, and ensure that there is an established motorcycle mentorship program in place.

Commander, Navy Installations has a contractor on staff to assist in this training effort, and each major installation has rider coaches available to provide training. There is no need to postpone training with the number of rider coaches now available. Contact your motorcycle safety representatives (MSRs) or local installation safety office to obtain information on available courses.

Command MSRs are a great resource, and the more involved they are in rider mentoring and the riding process, the more effective the motorcycle safety program will be.

Peer-to-peer rider support is one of the best ways to ensure all riders know and comply with Department of Navy and common sense motorcycle safety requirements.

The Naval Safety Center provides resources for MSRs. Weekly rider down reports are widely distributed to help increase awareness of motorcycle mishaps. Additional information is available to command MSRs by visiting the links below, where posters, infographics, talking points, tips and other motorcycle safety information can be found.

- http://www.nhtsa.gov/safety/motorcycles
- http://www.trafficsafetymarketing.gov/sharetheroad
- http://exchange.aaa.com/safety/motorcycle-safety

Remember that there is no such thing as a fender-bender for a motorcycle rider who is completely exposed. By working together and sharing the vast amount of information available, we can collectively reduce needless mishaps and safely share the road.

Hand Signals and Safe Motorcycling

Everyone should be aware of the biker wave, but what most people don't know is that there is a full system of hand signals designed to non-verbally communicate many of the things riders need to convey to other drivers and riders. Some of the most common hand signals used by motorcyclists out on the roadways can be found on the next page.

COMMON MOTORCYCLE HAND GESTURES

Left turn
Arm and hand extending left, palm facing down

Right turn
Arm out, bent at 90° angle, fist clinched.

Stop
Arm extended straight down, palm facing back.

Speed Up
Arm extended straight out, palm facing up, swing upward.

Slow Down
Arm extended straight out, palm facing down, swing down to your side.

Follow Me
Arm extended straight up from shoulder, palm forward.

You Lead/Come
Arm extended upward 45°, palm forward pointing with index finger, swing in arc from back to front.

Hazard in Roadway
On the left, point with left hand; on the right, point with right foot.

Single File
Arm and index finger extended straight up.

Double File
Arm with index and middle finger extended straight up.

Comfort Stop
Forearm extended, fist clenched with short up and down motion.

Refreshment Stop
Fingers closed, thumb to mouth.

Turn Signal On
Open and close hand with fingers and thumb extended.

Pull Off
Arm positioned as for right turn, forearm swung toward shoulder.

Cops Ahead
Tap on top of helmet with open palm down.

Fuel
Arm out to side pointing to tank with finger extended.

Safe motorcycling takes balance, coordination, and good judgment. Here are some ways to ensure you'll be around to enjoy riding your motorcycle for many years to come.

MAKE SURE YOU ARE PROPERLY LICENSED - Completing a motorcycle rider education course is a good way to ensure you have the correct instruction and basic experience it takes to ride a motorcycle. Do not stop there; continue to progress on with advanced level courses where offered.

PRACTICE OPERATING YOUR MOTORCYCLE - Make sure you know how to handle your motorcycle in a variety of conditions (e.g., inclement weather or encountering hazards such as slick roads, potholes, and road debris). If you plan to carry cargo or a passenger, be prepared to make adjustments to the tires, suspension, and placement of the load.

ENSURE YOUR MOTORCYCLE IS SAFE - Before every ride, you should check the tire pressure and tread depth, hand and foot brakes, headlights and signal indicators, as well as fluid levels.

ALWAYS WEAR THE PROPER PROTECTION. ALWAYS RIDE RESPONSIBLY.
MOST IMPORTANT, ALWAYS RIDE ALCOHOL & DRUG FREE.

CHECK OUT THESE LINKS MORE INFORMATION

National Highway Traffic Safet Administration
▶ https://www.nhtsa.gov/road-safety/motorcycles

Motorcycle Safety Foundation
▶http://msf-usa.org/

Mr. Perfetto worked in the Shore Safety Programs Directorate of the Naval Safety Center, where he served as a safety and occupational health specialist. Ms. Revell worked in the Shore Safety Programs Directorate of the Naval Safety Center, where she served as a traffic and recreation off-duty safety specialist.


HELP US
KEEP MOTORCYCLES
OFF THE
ENDANGERED
SPECIES LIST
Share the Road

LOST ON THE RUNWAY

By SN Mateo Diaz

Everyone has been lost at least once in their lives. For many of us, being lost usually happens while we're driving. This typically only means that we're getting to our destination a little later or perhaps having to stop and fire up our GPS to get turn-by-turn directions. For me, it meant finding myself on a runway at the same time that an airplane was touching down.

On Sept. 28, 2016, I was working in the VAW-116 line shack when a Seaman from a visiting E-2 squadron came over and asked to borrow the MSU-200 Air Start Unit (ASU). The visiting squadron was on detachment to Point Mugu, California from Norfolk, Virginia, and needed to borrow equipment from time to time. I checked the equipment out to the Seaman and began driving to the transient line area. Since they were visiting, I was unfamiliar with the location of the transient line area, and the Seaman had low situational awareness because he was unfamiliar with the airfield. This would have been a good time to double-check and ask questions about where to go, but everyone involved assumed that the other person knew where to go.

And you know what happens when you assume.

Without clarifying the best route to get there, we began driving and navigating to the transient ramp. While driving on what I thought was a taxiway, the hair on the back of my neck began to stand up and I looked around and saw the markings for a runway. The next thing I saw was a Hawkeye do a touch-and-go on the same piece of concrete I was on. Afraid for the lives of everyone on that piece of concrete, I put the pedal down and continued across the runway until we got to the transient ramp. We dropped off the equipment and I returned to the VAW-116 line shack, this time taking the appropriate route.

When I returned to the line shack, my leading petty officer (LPO) pulled me aside and informed me that I had, in fact, driven across an active runway. The tower had contacted VAW-116's maintenance control desk and told them of the incident. For the second time that day my heart started racing; this time for fear of losing my job. I eventually sat down with my master chief and discussed how the event unfolded and what learning points we could pull from it. Some immediate actions involved me taking a flight line driver's course as well as debriefing each shop about the incident.

Driving across an active runway has the potential to have fatal consequences; we were lucky that no one was hurt or any equipment damaged. The visiting squadron's Seaman and I should have both taken time to acquaint ourselves with our surroundings and verified the appropriate route to take. Utilizing deliberate operational risk management (ORM) or simply asking ourselves "What is different?" would have greatly reduced the likelihood of this happening. We all receive yearly ORM training and sometimes it's easy to gloss over the steps, but it's times like these that highlight how important and relevant the process truly is to a safe evolution.

SN Mateo Diaz is assigned to VAW-116 Sun Kings located in Point Mugu.

RUNNING INTO THE GROUND

By AT2 Jordan Osmera

I run every morning before work. I love to. It helps me wake up plus I get my workout done early so I have the rest of the day after work to myself. On July 30, 2016, I woke up to run as usual, but this time I was running behind. I run the same path every morning because it's generally clear of traffic.

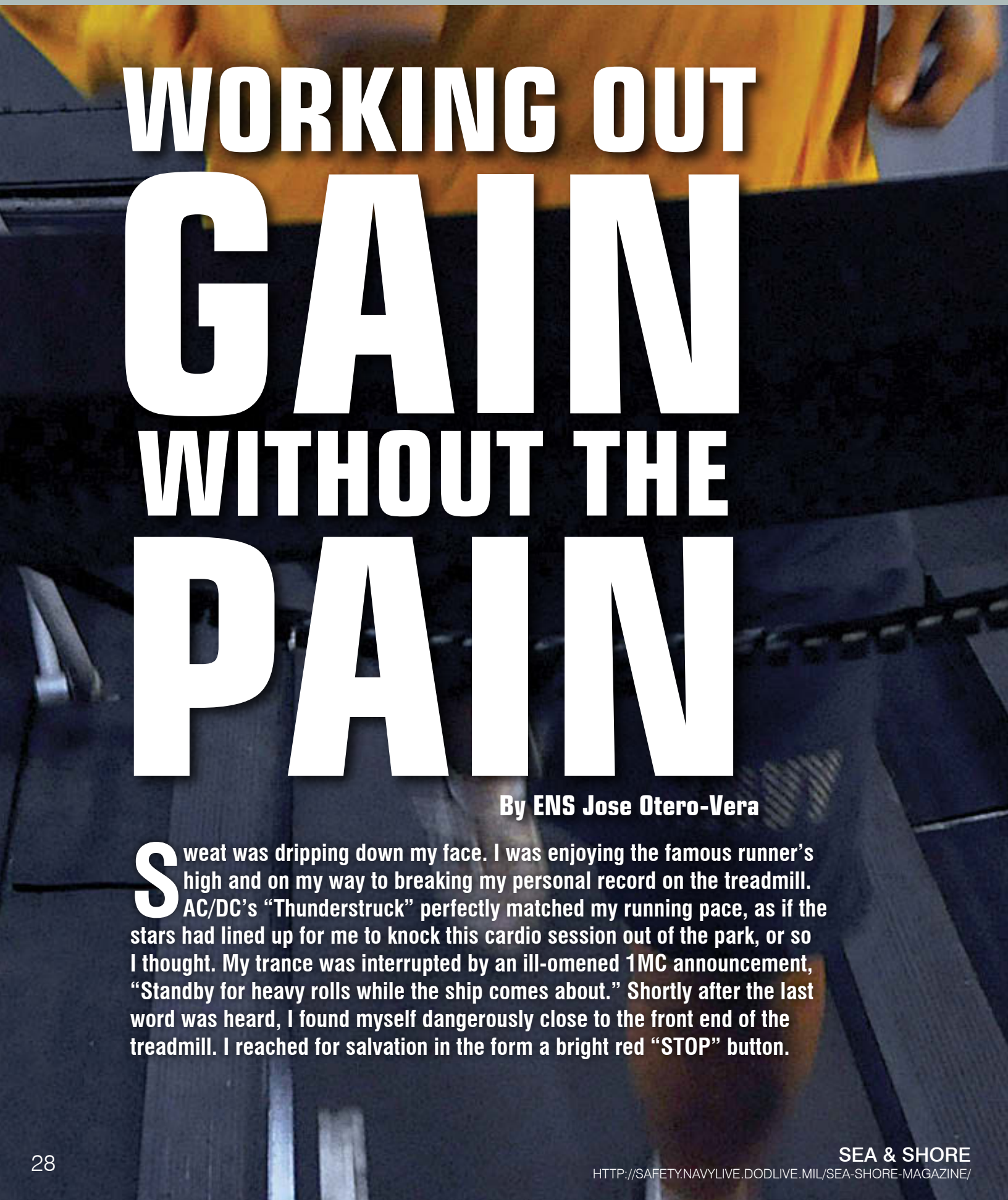
About two miles into the run, I came to an intersection with rattle grates on either side of the road. As I approached the intersection, I noticed two vehicles driving toward me with their lights on. The lights temporarily blinded me as I ran over the grates, and I tripped and fell on my knee.

At first I didn't feel any pain, so I stood back up to make sure I was okay, dusted myself off, and kept going. I was more worried about the embarrassment of falling in front of two groups of people. When I looked at my knee, it was a different story. I moved the palm of my hand when I saw the blood running down my leg into my shoe and saw the bottom of my knee cap and the tendon attached to it. It looked like a large chunk of my knee just fell on the ground. Both of the vehicles just sat there with their lights shining on me and I realized no one saw how bad it was. I used my phone's flashlight to signal to someone that I needed help.

Someone immediately drove toward me and got out to help once they saw what my knee looked like. The other car drove by once I was in the first vehicle and left. They took me to the Air Force security building and called an ambulance, my husband, and my squadron. At the ER, I got a tetanus shot, antibiotics, and pain medication. The doctor checked to make sure I could still move my knee and that I didn't damage the tendon. In the end, I received 36 stitches and couldn't bend my knee for four weeks, but thankfully avoided any major injury.

What was supposed to be a routine morning run, turned out to be a painful trip to the emergency room. It was unfortunate that the drivers blinded me at the exact moment I ran over the grates, but also lucky that they were there to give me a ride to the medical facility. In hindsight, I wish I had either slowed down or stopped running until the vehicles passed and I had a clear field of view of the obstacles. When routine tasks become atypical, it's never a bad idea to slow down and take the conservative approach. I learned this lesson while off-duty, but we can all apply this to our professional environments as well.

AT2 Jordan Osmera is an aviation electronics technician with Fleet Readiness Center Southeast (FRCSE) Jacksonville.



WORKING OUT GAIN WITHOUT THE PAIN

By ENS Jose Otero-Vera

Sweat was dripping down my face. I was enjoying the famous runner's high and on my way to breaking my personal record on the treadmill. AC/DC's "Thunderstruck" perfectly matched my running pace, as if the stars had lined up for me to knock this cardio session out of the park, or so I thought. My trance was interrupted by an ill-omened 1MC announcement, "Standby for heavy rolls while the ship comes about." Shortly after the last word was heard, I found myself dangerously close to the front end of the treadmill. I reached for salvation in the form a bright red "STOP" button.

Too late! My foot violently struck the treadmill's plastic frame and, in a blink of an eye, my gaze went from the uninteresting bulkhead down to the vicious and merciless treadmill. There was one thing that made the difference between an unpleasant treadmill face tattoo and walking away relatively unscathed: the emergency stop cable. Luckily, I limped away with just a hurt ego and a scraped knee.

Staying fit while underway can be a very difficult and frustrating goal, especially when your ship is smack in the middle of a high operational tempo. Many ships, such as USS Arleigh Burke (DDG-51), provide her Sailors with a well above average fitness facility, well-equipped with free weights, cable machines, and cardio equipment in an effort to maintain fleet fitness standards and to provide Sailors with a means to let off steam. However, these benefits oftentimes go hand in hand with inherently hazardous situations as we hop on the treadmill or hit the weights. Riding on what is essentially a metal cork in the ocean, our bodies have to account for pitch and roll when transiting the ship, let alone running full speed on a barely user-friendly machine or holding up heavy chunks of metal over our heads. One false step and you could find yourself on the wrong side of a medical emergency and on a one-way trip to the hospital.

Many of us who have made the gym part of our underway routine have seen firsthand potentially life threatening situations while we squeeze a workout into our busy schedule. A few of my (dis)honorable mentions include the "shoulder press gone wrong," where I saw in slow motion a shipmate's elbow start rolling the wrong way, and the "dumbbell avalanche," where you watch in fear as improperly stowed dumbbells precariously dangle from the weight rack over someone doing sit-ups below. It is no secret that under the worst cocktail of factors, one of your shipmates might have been heading at flank towards very serious bodily harm or in the worst of cases, death.

The gym is inherently a dangerous place both ashore and at sea. We all take into account the risk in order to reap the benefits of a healthy lifestyle. However, the reality of the matter is that the chance of most of these cringe-worthy situations occurring can be highly reduced. The ship will continue to roll, the seas will never accommodate to our schedule, but through proper planning, risk management, supervision, and situational awareness, we can make our average workout be just that, an "average" workout.

Here are some nuggets of wisdom that make for a safe workout underway: Know the seas. Take a quick trip to combat information center and ask a watchstander what they expect the weather will be like that day. This way you can decide if you can replace some of the free weight-intensive exercises with body weight equivalents.

Be mindful of your surroundings. Keep an eye out for misplaced equipment, runaway dumbbells, and other gear adrift. Be a leader and move the object out of the way for your shipmates.

Know your equipment. Understand all of your equipment's safety features and use them. They might appear annoying at times but nothing is more annoying than a treadmill skid mark on your face.

Protect your shipmates. Be that on-call spotter and look out for others in the gym. You might stop a developing dangerous situation before anyone gets hurt.

Do not be a hero. Know when to call it. If the ship undergoes unforeseen maneuvering or weather conditions, consider wrapping up your workout. You can easily make up some reps or a set later, but you can't say the same for missing teeth.

ENS Jose Otero-Vera is currently the assistant safety officer onboard USS Arleigh Burke (DDG 51).

ENS Jose Otero-Vera is currently the assistant safety officer onboard USS Arleigh Burke (DDG 51).

HEAT RELATED ILLNESS: WHAT YOU NEED TO KNOW

By LCDR Todd P. Davis

INSIDE STORY

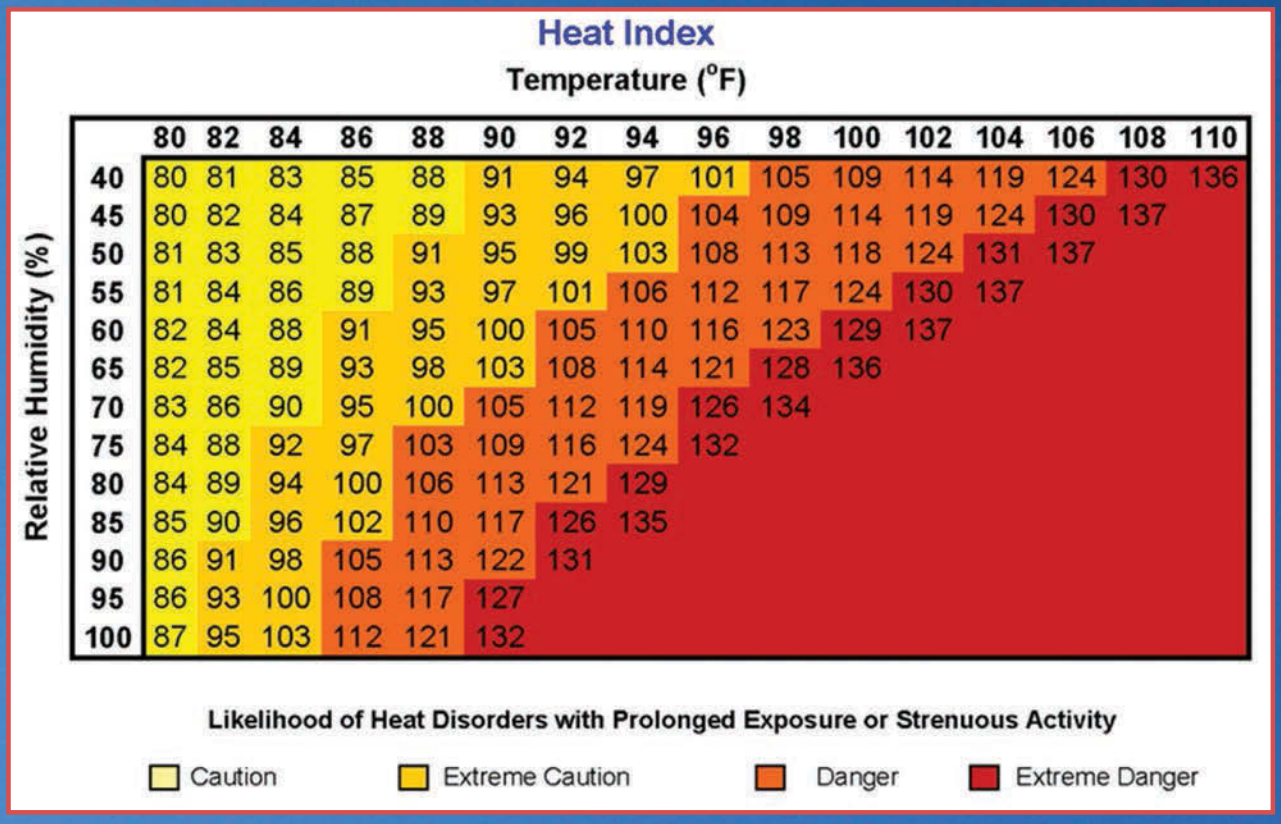
On Feb. 11, 2016 a Sailor aboard an aircraft carrier became lightheaded and dizzy from dehydration approximately 30 minutes into a workout. The Sailor's workout consisted of stationary biking, pushups, and sit-ups. The service member had only four hours of restless sleep for several nights prior to this incident. In the hours preceding the Sailor's workout, the service member drank five beverages consisting of: a name brand flavored water, orange juice, and one glass of water. The temperature had been in the low to mid-70s for several weeks in the area. The service member reported not feeling thirsty during the exercise routine; but did have a history of light-headedness on two previous occasions due to dehydration.

Why should you be concerned about heat related illness? Sailors and Marines fall victim to heat stress conditions every year compromising their health, productivity, and alertness hindering an organization's ability to accomplish its mission.

Heat-related illnesses occur when heat exposure or physical exertion increases to the point at which the body's attempts to cool itself are no longer effective. Symptoms observed include profuse sweating, dehydration, rapid heart rate, cramps, dizziness, nausea, fatigue, and core body temperatures of 100°F and above. Workers and supervisors must be able to recognize symptoms early. If symptoms go untreated, heat-related illnesses can lead to death.

Training should be established within an organization to help supervisors and workers prevent, recognize, and treat heat-related illness. Supervisors should implement a heat acclimatization program for workers, encourage proper hydration, establish an appropriate work/rest schedule for heat stress conditions, ensure access to shade or cool areas, monitor workers during hot conditions, provide prompt medical attention to workers who show signs of illness, evaluate work practices continually to reduce exertion and environmental heat stress, monitor the heat index daily, and consider rescheduling jobs with high heat exposure to cooler times of the day.

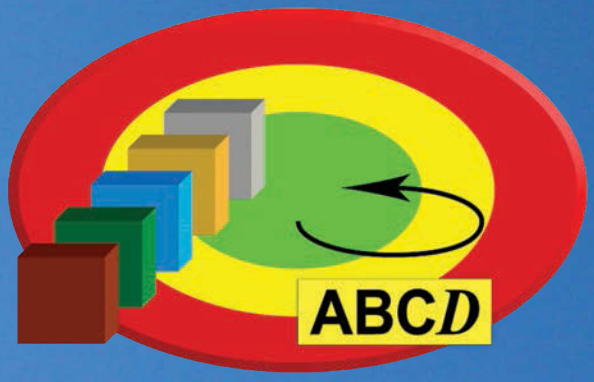
Workers should drink water or other hydrating liquids frequently enough to never become thirsty (about 1 cup every 15-20 minutes), eat well-balanced meals, wear loose-fitting breath-



able clothing, take breaks in the shade or a cool area when possible, be aware that protective clothing or personal protective equipment may increase the risk of heat stress, monitor your physical condition and that of co-workers and tell a supervisor if they show symptoms of heat-related illness. Talk with your doctor about medications you are taking and how the medications may affect heat tolerance. Refer to figure 1 and figure 2 to assess your risk.

WHEN THE HEAT IS ON, STAY HYDRATED

You have the tools and resources, now put them into action. Use time critical risk management to keep the heat off! It's as easy as **ABC*D***.



A - Assess the situation.

B - Balance resources.

C - Communicate to others.

D - *Do* and *Debrief* the event.

LCDR Davis worked in the Shore Safety Programs Directorate of the Naval Safety Center, where he served as the industrial hygiene officer.

WGBT Index and Intense Physical Exertion

Flag Color	WGBT Index (F)	Intensity of Physical Exercise
	Less than 80	Extremely intense physical exertion may cause heat exhaustion or heat stroke. Caution should be taken.
	80 – 84.9	Discretion required in planning heavy exercise for unseasoned personnel. This is a marginal heat-stress limit for all personnel.
	85 – 87.9	Strenuous exercise and activity (e.g. close order drill) should be curtailed for new and unacclimated personnel during the first 3 weeks of heat exposure.
	88 – 89.9	Strenuous exercise curtailed for all personnel with less then 12 weeks training in hot weather.
	90 and above	Physical training and strenuous exercise suspended for *all personnel* (excluding operational commitment not for training purposes).

Figure 1: Wet Bulb Globe Temperature and intense physical exertion flag reference.

Heat Stress Injuries

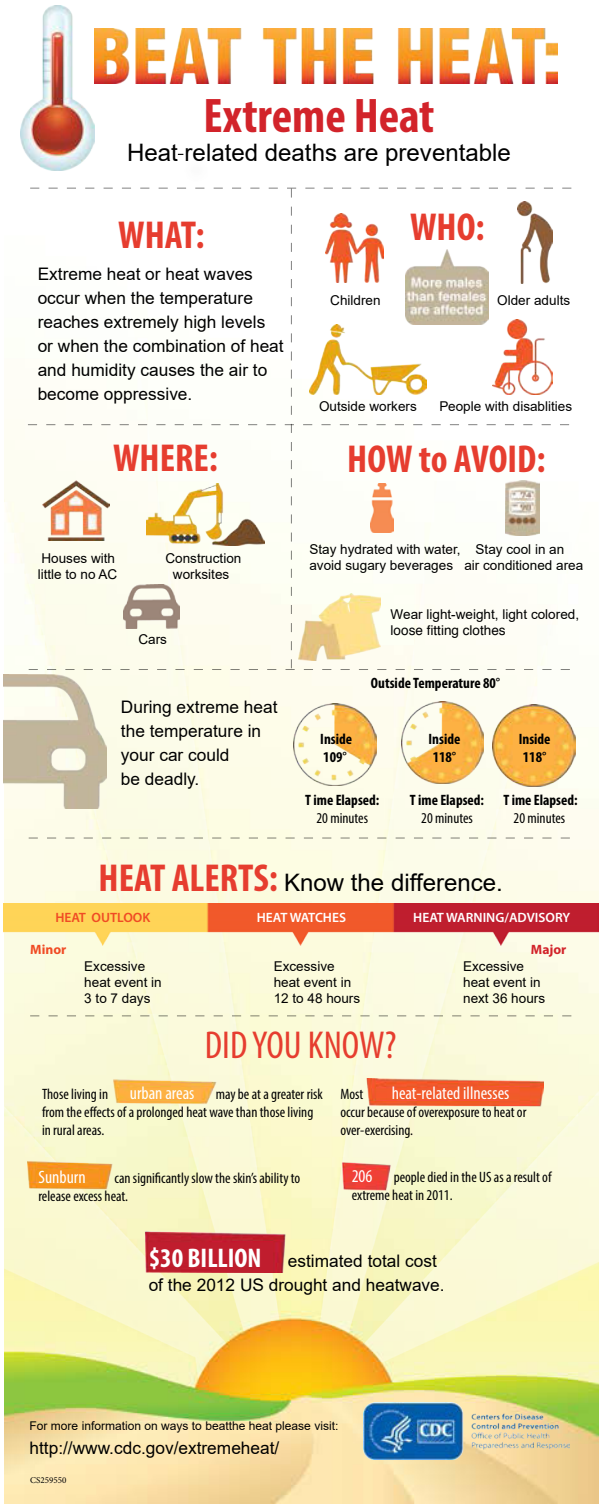
Injury	Symptoms	Treatment
Heat Rash	• Red raised rash • Impairs sweating and decreases effectiveness of sweating	*Action* 1. Notify space supervisor/EOOW 2. Notify Medical Department *Treatment* 1. Best treated by keeping the skin dry for part of the day at least. 2. Cooled sleeping quarters will remedy the situation, and permit personnel to work in hot-humid conditions without developing heat rash. 3. Avoid tight clothing.
Heat Cramps	• Muscle cramps, pain, or spasms in the abdomen, arms or legs	*Action* 1. Notify space supervisor/EOOW 2. Notify Medical Department *Treatment* 1. Stop all activity, and sit in a cool place. 2. Drink clear juice or a sports beverage, or drink water with food. 3. Avoid salt tablets. 4. Do not return to strenuous work for a few hours after the cramps subside. 5. Seek medical attention if you have the following: heart problems, are on a low-sodium diet, or if the cramps do not subside within one hour.
Heat Exhaustion Heat illness caused by salt depletion and dehydration	• Moist, clammy skin • Dilated pupils • Normal or subnormal temperature • Dizziness, confusion and/or nausea • Weak pulse • Rapid breathing	*Action* 1. Notify space supervisor/EOOW 2. Notify Medical Department *Treatment* 1. Remove victim from hot environment 2. Stop the victim from performing strenuous activity 3. Hydrate
Heat Stroke Heat illness where the thermo-regulatory system doesn't function, so the main avenue of heat loss is blocked	• Dry, red, hot skin • Pupils constricted • Very high body temperature • Confusion, dizziness and/or nausea • Pulse rapid • Unconsciousness • Coma • Death	*Action* 1. Notify space supervisor/EOOW 2. Notify Medical Department *Treatment* 1. Remove victim from hot environment 2. Stop strenuous activity 3. Hydrate 4. Lower body temperature by any means

Figure 2: Heat stress injury symptom and treatment chart.

DID YOU KNOW?

The following factors are individual risks for heat casualties. The more factors, the higher the risk.

- **Not acclimatized to heat (need 10 to 14 days to get trainees adequately acclimated)**
- **Exposure to cumulative days (two to three days) of any of the following:**
  - **Increased heat exposure**
  - **Increased exertion levels**
  - **Lack of quality sleep**
- **Poor fitness**
- **Overweight**
- **Minor illness (cold symptoms, sore throat, low-grade fever, nausea, vomiting)**
- **Taking medications (either prescribed or over the counter), supplements or dietary aids (e.g., allergy or cold remedies or Ephedra supplements)**
- **Use of alcohol in the last 24 hours**
- **Prior history of heat illness (any heat stroke or more than two episodes of heat exhaustion)**
- **Skin disorders such as heat rash and sunburn that prevent effective sweating**
- **Age greater than 40 years**



ADDITIONAL RESOURCES

Naval Safety Center

▶ http://www.public.navy.mil/navsafecen/Pages/acquisition/heat_stress.aspx

Centers for Disease Control and Prevention

▶ https://www.cdc.gov/extremeheat/

TORNADO SAFETY

By Bonnie Revell

With tornadoes, it can be easy to fall into a complacent mindset of "it will never happen to me," because they only happen in Tornado Alley – that region between the Rocky and Appalachian Mountains. Tornadoes rank third on the National Weather Service's list of weather events that cause the most fatalities. Therefore, everyone needs to know the importance of taking severe weather and tornado warnings seriously; tornadoes can occur anywhere there is severe weather (convective environment – mostly in conjunction with thunderstorms).

Ms. Revell served as a safety professional for more than 25 years. She worked in the Shore Safety Programs Directorate at the Naval Safety Center, where she served as a traffic and recreation off-duty safety specialist.

Tornadoes, the most violent natural hazard, are rotating, funnel-shaped clouds, formed from thunderstorms. Strong winds are a tornado's most destructive aspect, with gusts reaching as high as 300 mph. The damage path from these natural hazards can be a mile wide. Tornado season generally runs spring through summer, but tornadoes can occur any time of the year. They most often occur at the tail end of a thunderstorm with 80 percent of tornadoes occurring between noon and midnight. While some areas are more prone to tornadoes than others, they can occur anywhere, so it is best to be prepared.

How to Prepare for a Tornado

- **When a tornado threatens, take immediate action. Do not delay!**
- **Stay informed and know tornado terminology:**
  - **Tornado watch** — *Weather conditions are favorable for the development of a tornado. Stay tuned to the radio or TV for more information and further instructions.*
  - **Tornado warning** — *A tornado has been spotted. Take shelter immediately.*
- **Identify a place in your home and at work to take shelter in case of a tornado:**
  - *A storm shelter or basement provides the best protection.*
  - *Stay away from windows, doors, and outside walls.*
  - *In homes and small buildings, go to an interior part of the lowest level—closets, bathrooms, or interior halls. Put as many walls between you and the outside as possible.*
  - *In schools, nursing homes, hospitals, factories, and businesses, go to the pre-designated shelter areas. Interior hallways on the lowest floor are usually best.*
  - *In high-rise buildings, go to an interior small room or hallway.*
  - *Leave areas with high, open-roof enclosures such as auditoriums, gymnasiums, aviation hangars, etc.*
  - *Leave mobile homes or vehicles, and go to a substantial shelter. If there is no shelter nearby, lie flat in the nearest ditch, ravine, or culvert with your hands shielding your head.*
- **Conduct frequent tornado drills.**
- **Obtain an emergency supply kit and make a family emergency plan.**

What to Do If There Is a Tornado

- **Take shelter immediately in a designated room.**
- **If you are outside, find shelter immediately or, if shelter is unavailable, lie flat in a ditch or low-lying area.**
- **If you are in a car, stop immediately and find shelter. Do NOT try to drive through a tornado.**
- **Stay tuned to radio or TV for information and instructions as they become available.**
- **Stay in your shelter until the tornado has passed.**
- **Once you are in a safe place, report to your command if you are military or civilian government personnel or a member of the selective reserves.**

ADDITIONAL RESOURCES

Ready.gov

▶ https://www.ready.gov/tornadoes

National Weather Service

▶ http://www.weather.gov

American Red Cross

▶ http://www.redcross.org/get-help/prepare-for-emergencies/types-of-emergencies/tornado

▶ http://www.redcross.org/images/MEDIA_CustomProductCatalog/m4340177_Tornado.pdf

Join the movement at www.ready.gov/prepare

America's PrepareAthon! is a community-based campaign that is bringing together millions of people to practice the simple steps that will help them get and stay prepared for disasters. Follow America's PrepareAthon! on Twitter @PrepareAthon using #PrepareAthon.

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Line 5: FPO (AA, AE, AP), Zip Code	FPO	ZIP	Example: FPO AP 12345

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Line 3: Activity			Example: MARINE CORPS TRAINING
Line 3: PSC Number, Box Number	PSC	BOX	Example: PSC 123 BOX 45
Line 4: FPO (AA, AE, AP), Zip Code + 4	FPO	ZIP +4	Example: FPO AE 67890-1234

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Thank you for your time!

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